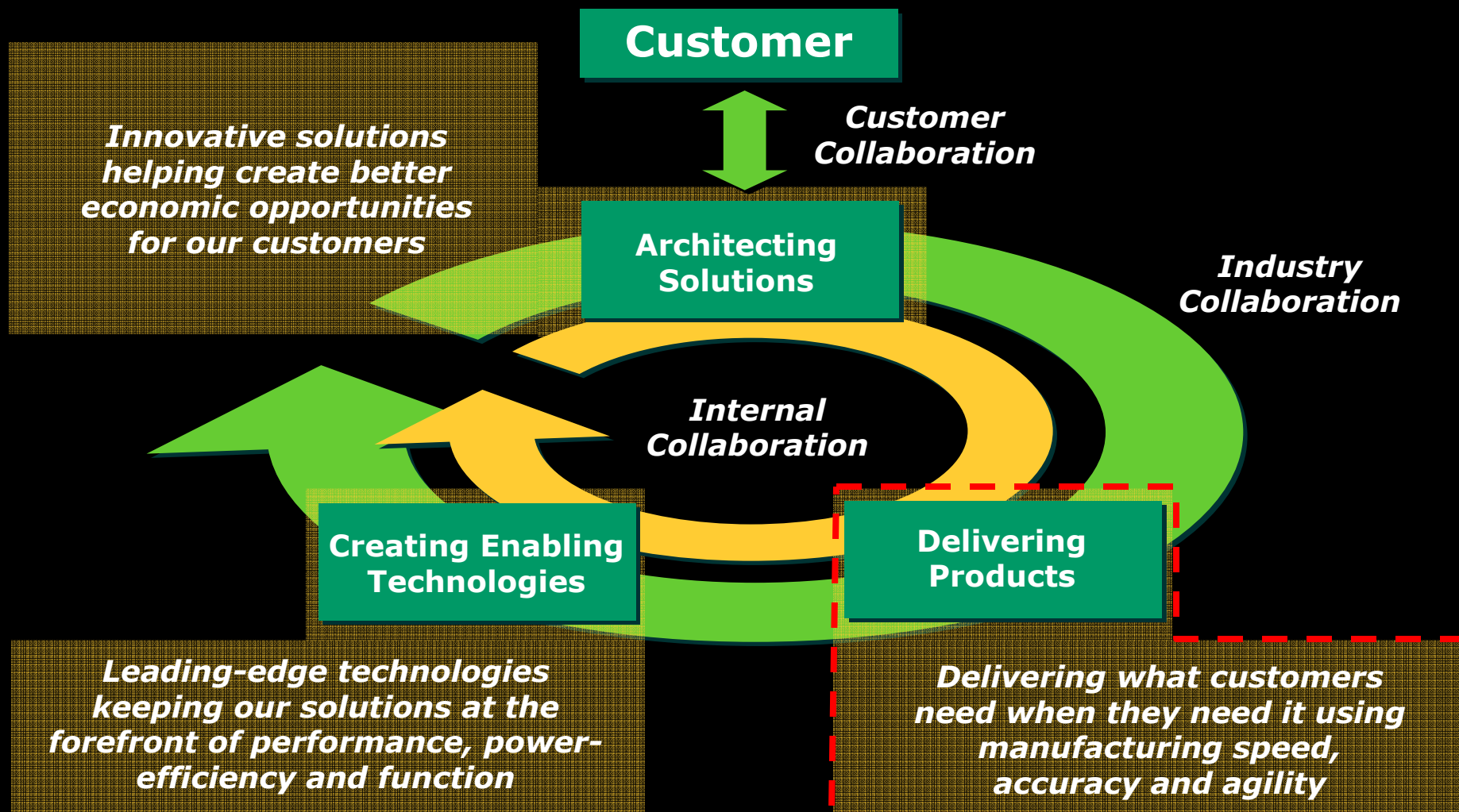




Daryl Ostrander

Senior Vice President,
Logic Technology & Manufacturing,
Product/Technology Implementation,
Microprocessor Solutions Sector
June 10, 2005



Creating an Entirely New Model for *Customer Centric* Manufacturing



AMD has created an entirely *new and differentiated* manufacturing model

It emphasizes speed, accuracy and agility across AMD's manufacturing operations to better respond to, and fulfill, the needs of our customers

We call it Automated Precision Manufacturing (APM)

You can think of it as manufacturing operations deliberately tuned to accurately deliver what customers need, when they need it



***Faster
customer
response***

***Faster intro of
advanced
technologies***

***Better quality
and higher
efficiencies***

***Greater
capacity
flexibility***

Speed

+

Accuracy

+

Agility

Rapid product improvements in *current* technology generation

- Quarterly transistor performance/power upgrades in MPUs — five last year alone
- Rapid and consistent increase in production yields on new products in the same technology generation

Rapid transition to products in *new* technology generations

- Fast, smooth transitions using the most advanced submicron structures and materials
- Consistent reduction in time to mature yields on new products in the next technology generation

APM enables faster transitions to new technology generations and achievement of mature yields

Customers can introduce their latest, highest performing, highest margin products sooner

In-Fab Learning

2

Research

1

New submicron technologies R&D

80% reduction in time to mature yield over the past three generations

Volume Production

3

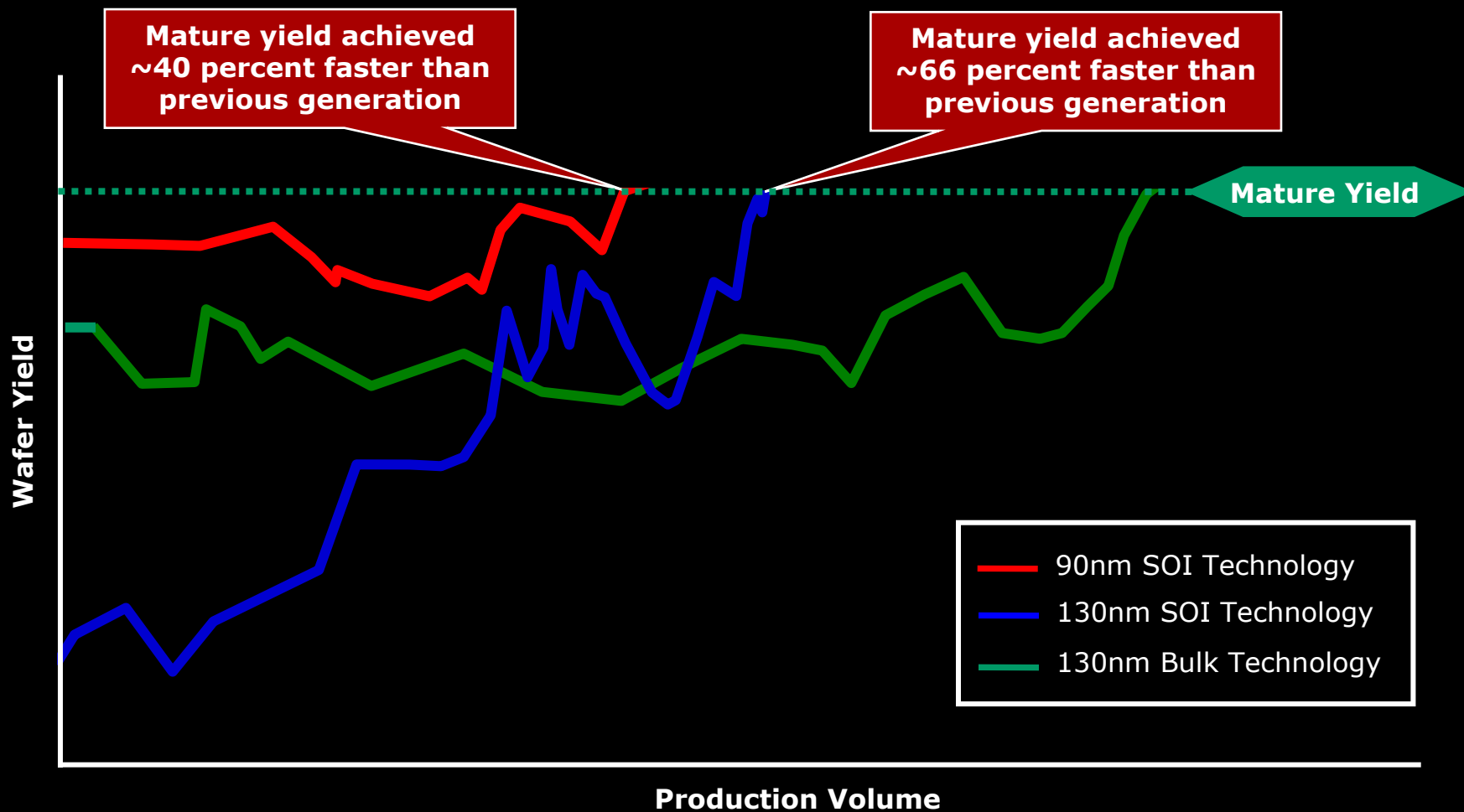
Volume production initiated

Mature Yields

4

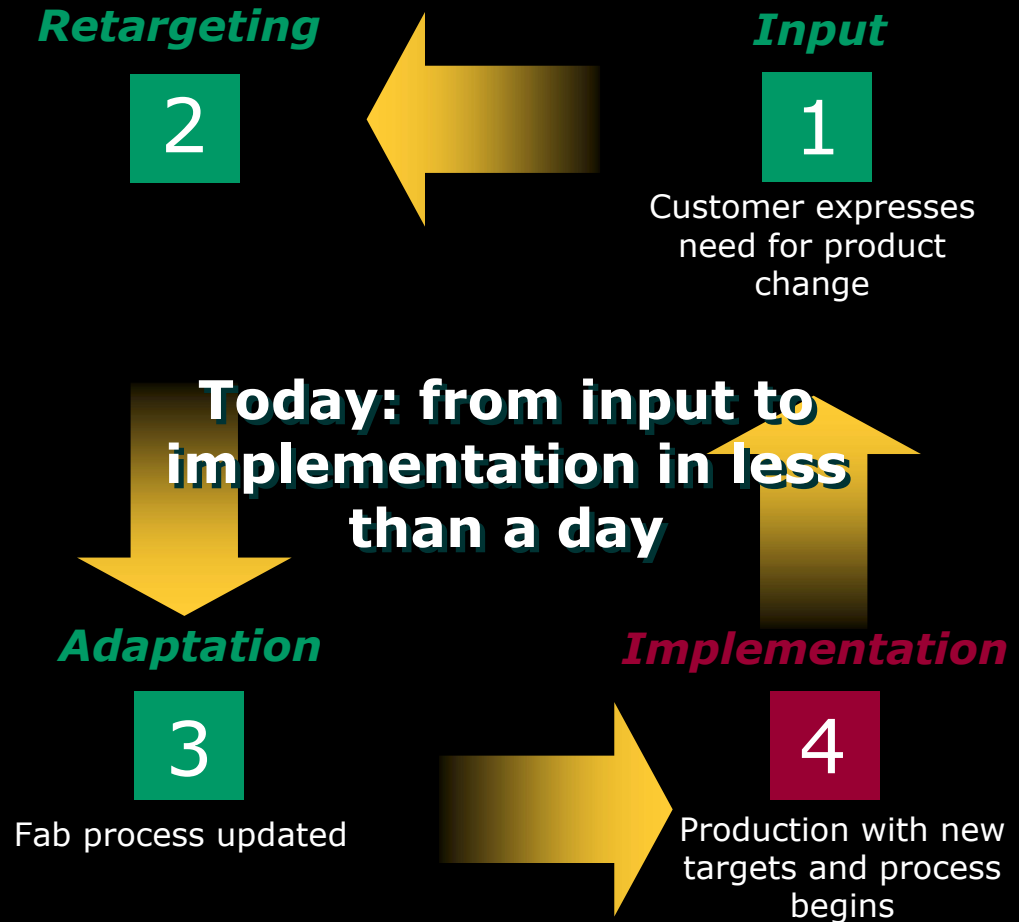
Yield entitlement achieved

Faster Yield Ramp, Generation After Generation

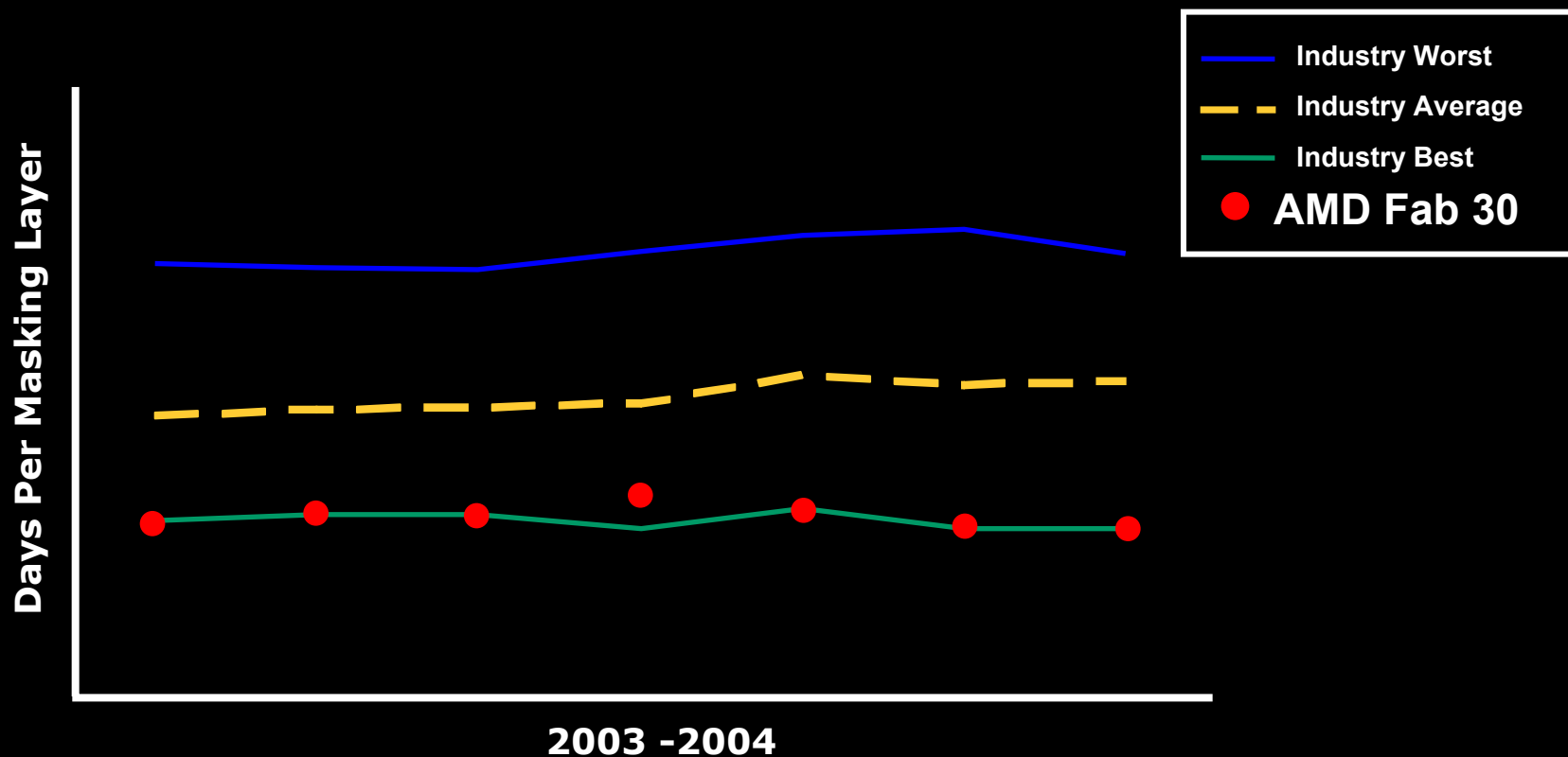


APM enables more agile changes to production mix and product power/performance targets

Customers can more accurately match product supply with demand to take full advantage of near-term revenue opportunities

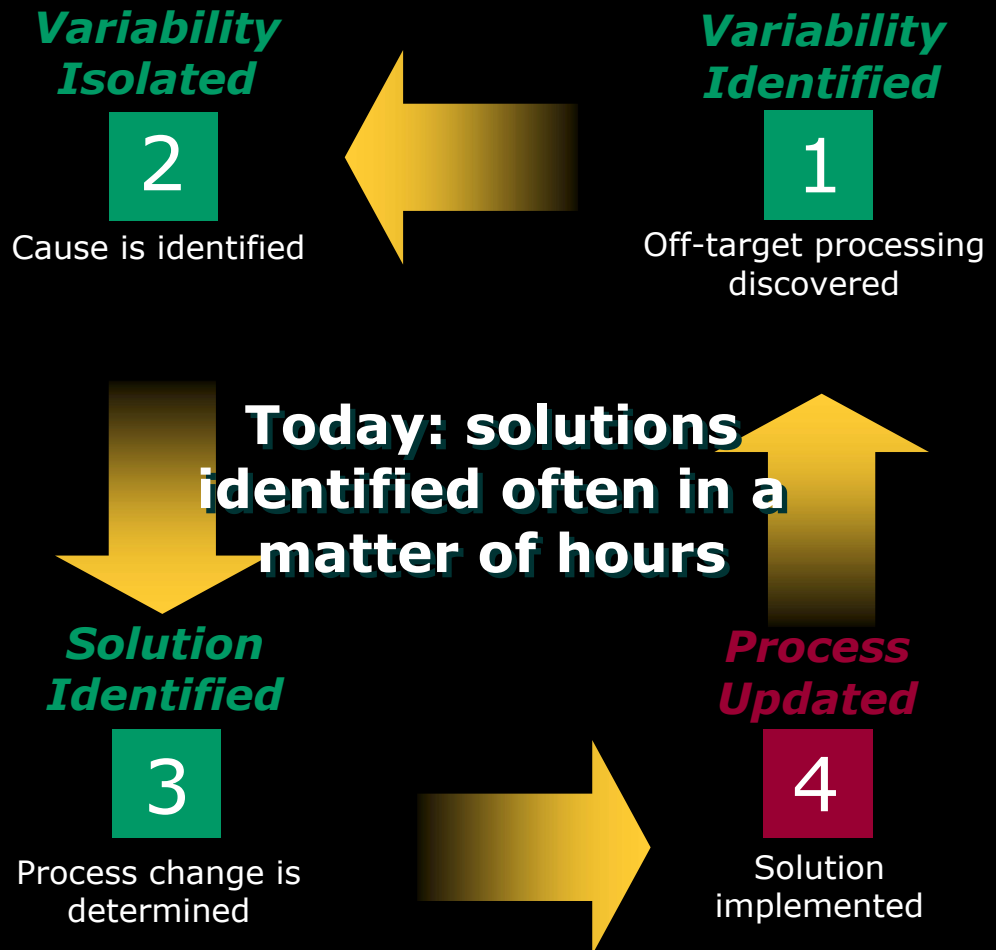


Once changes are implemented, APM helps deliver them to customers faster

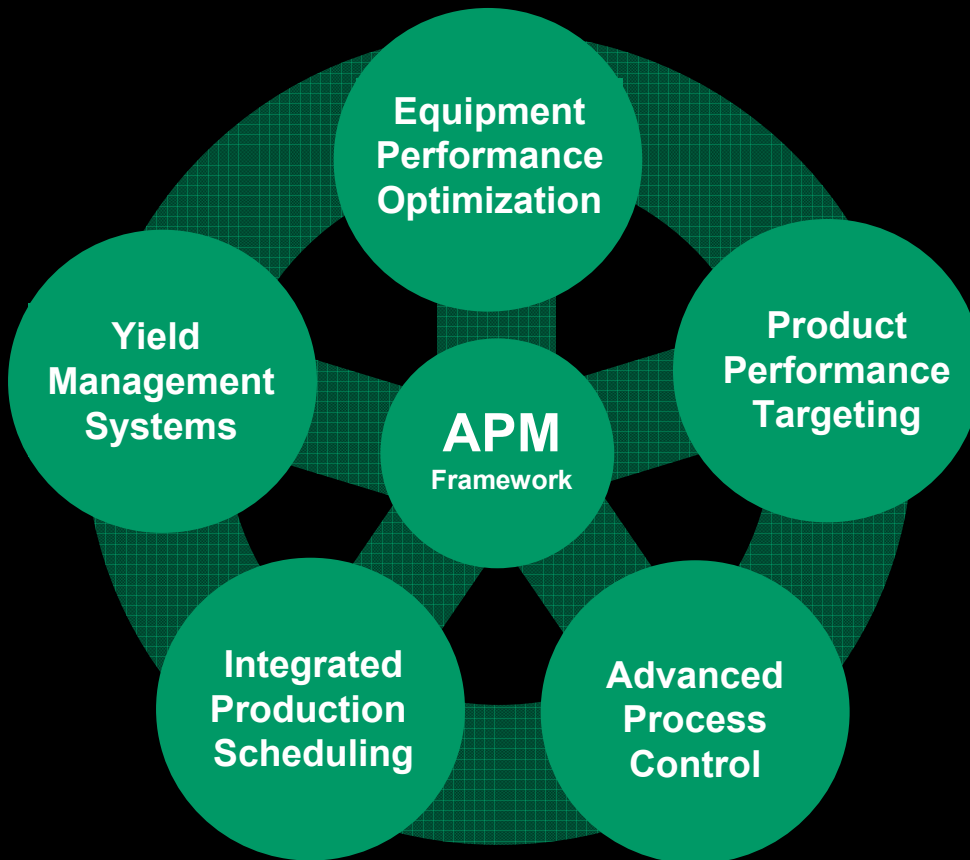


APM enables more accurate identification and correction of processing variability

Customers can better forecast and achieve supply chain requirements due to consistent delivery volumes



Over 400 AMD patented or patent-pending technologies



Highly automated and synchronized decision making

Five integrated algorithmic analysis systems — much more than just APC

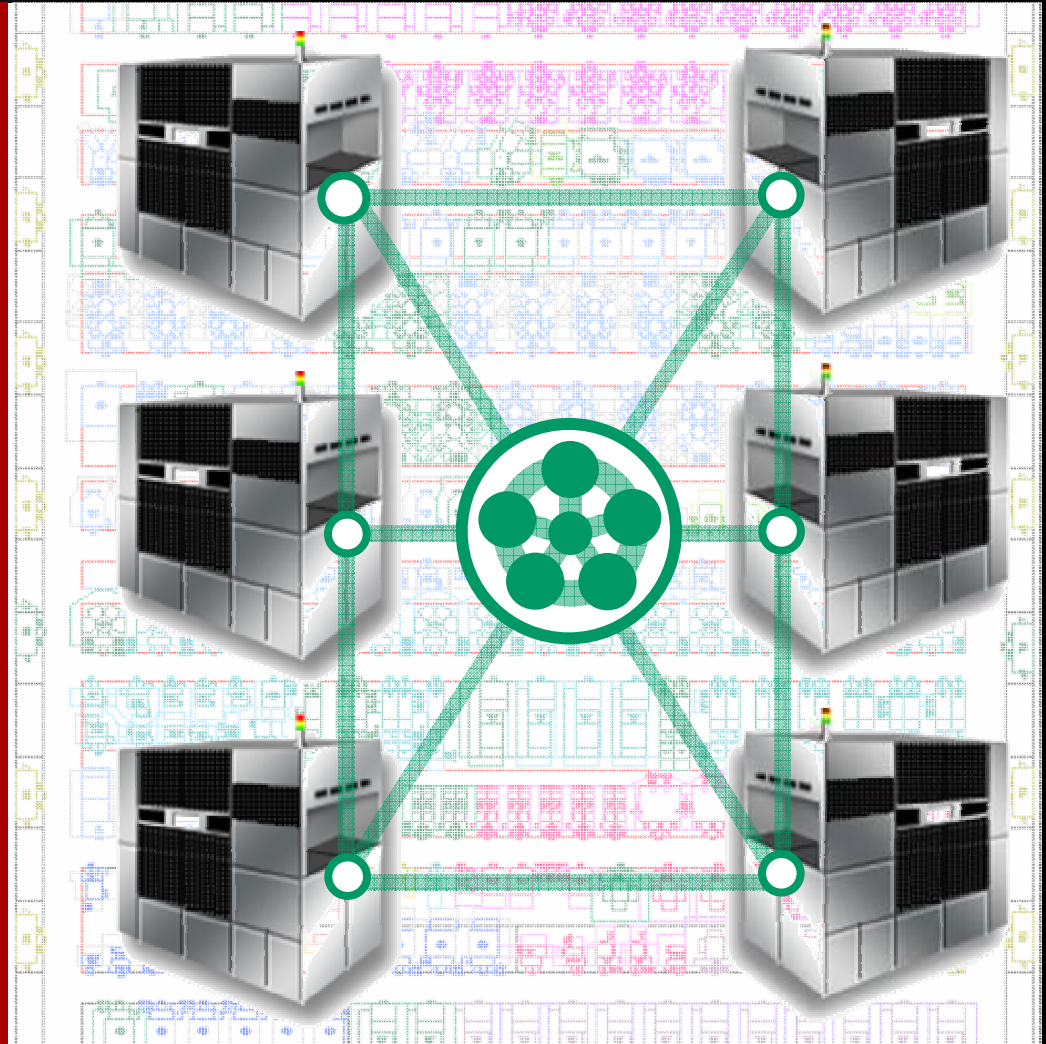
Includes proprietary technologies, logic and business processes

Fed by fab-wide tool and data integration

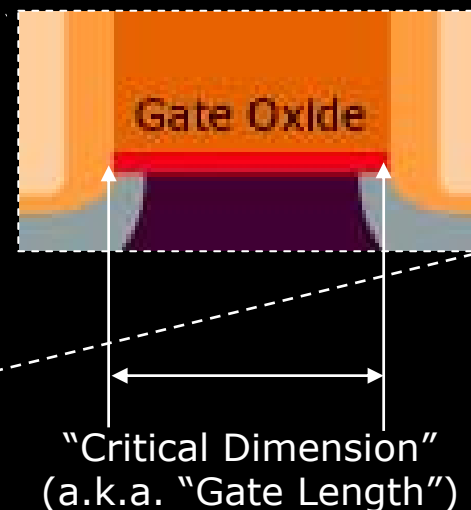
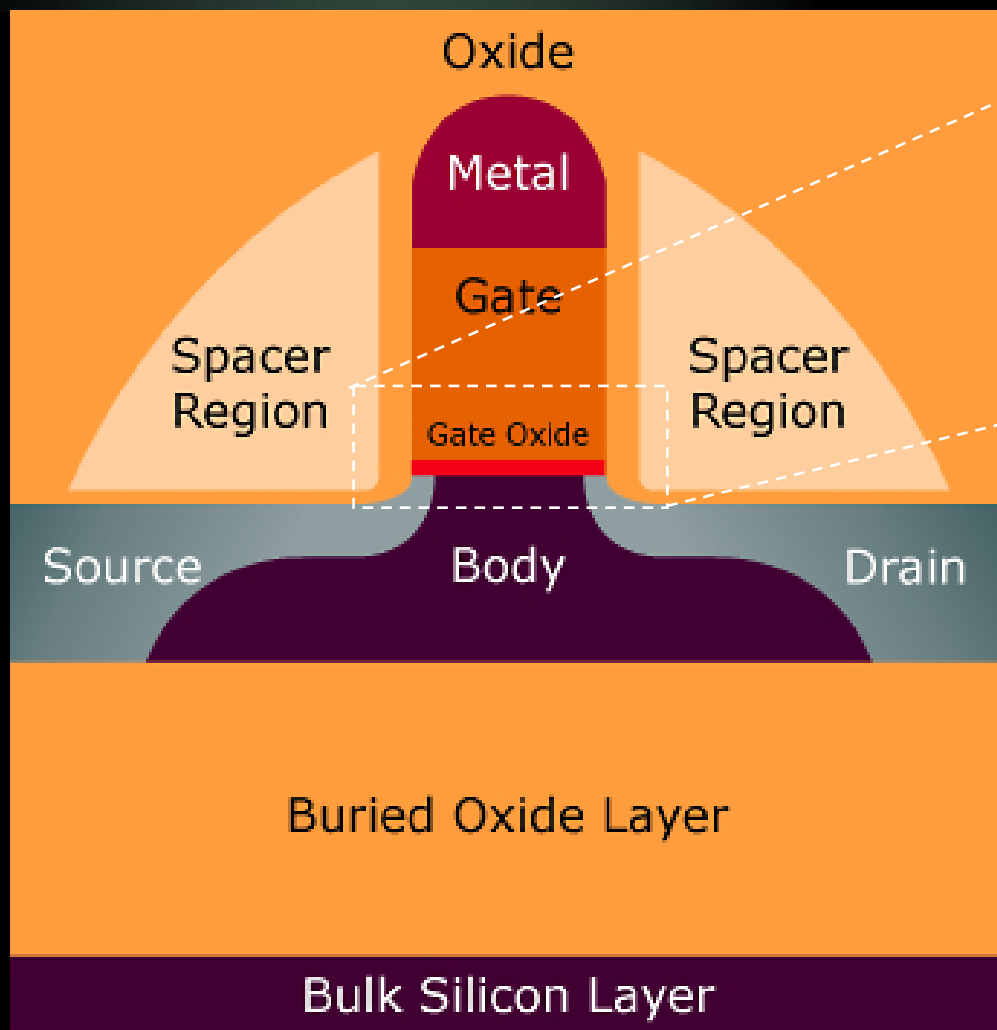
All critical tool sets within AMD fabs are networked and integrated into the APM framework

APM constantly monitors the health of all tools as well as the current health of all chips in production

Using this information, APM can automatically adjust chip recipes to account for small but critical changes in tool performance



Example: "Critical Dimension" Control



Adjusting the critical dimension on each transistor results in a performance change in the resulting chip

There are over 200 million transistors in the current dual-core AMD Opteron™ processor

Example: “Critical Dimension” Control



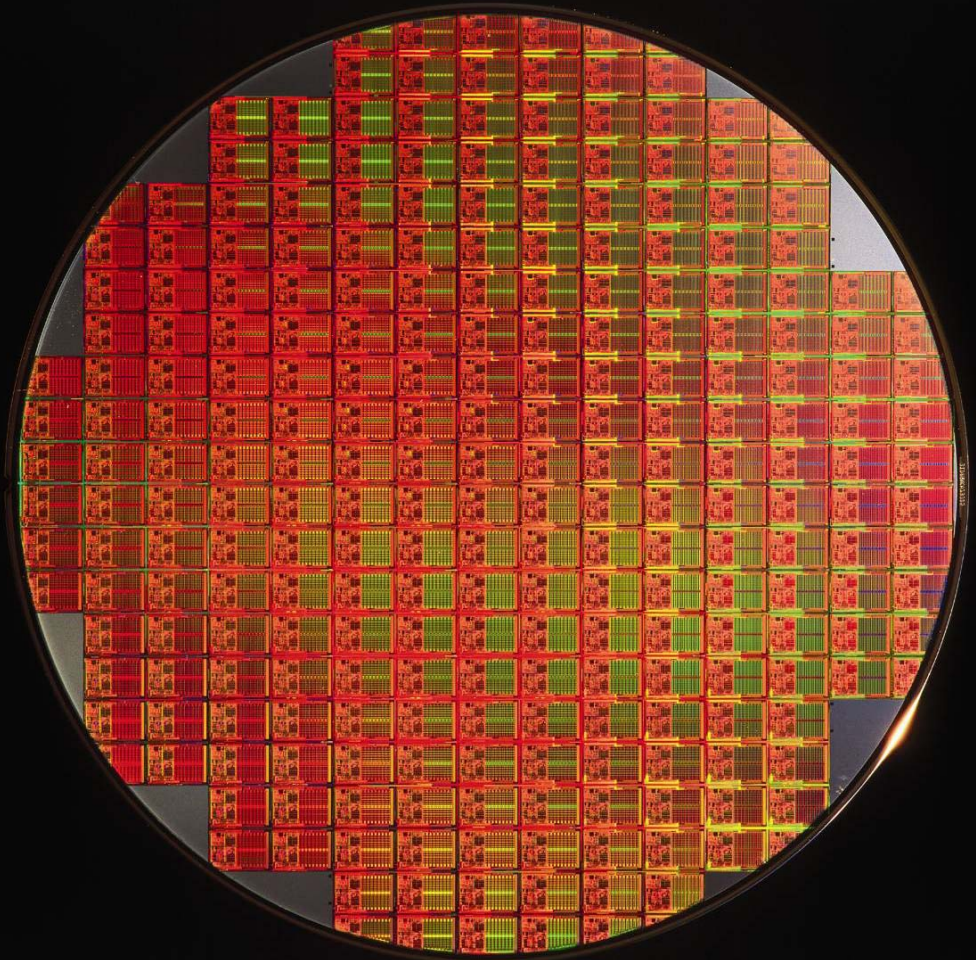
Using APM, AMD can rapidly, accurately and automatically make ***adjustments as small as 1nm*** (60 thousand times smaller than a human hair) to the critical dimension ...

In *every* transistor

In *every* chip

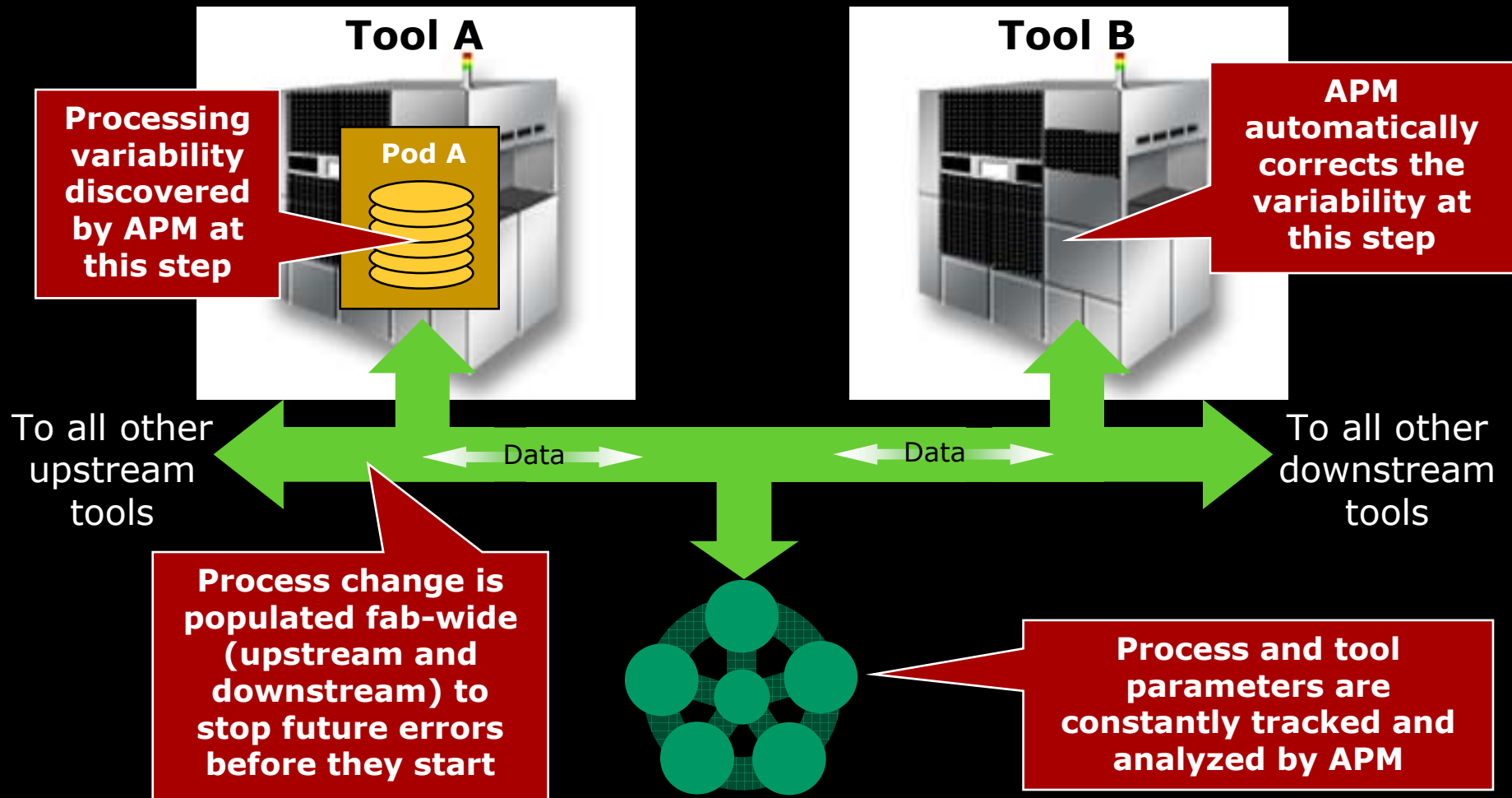
On *every* wafer

That's roughly **21 billion** transistors per wafer*



* Based on production of 90nm AMD Opteron processors on 200mm wafers

Example: Feed Forward, Feed Backward Correction



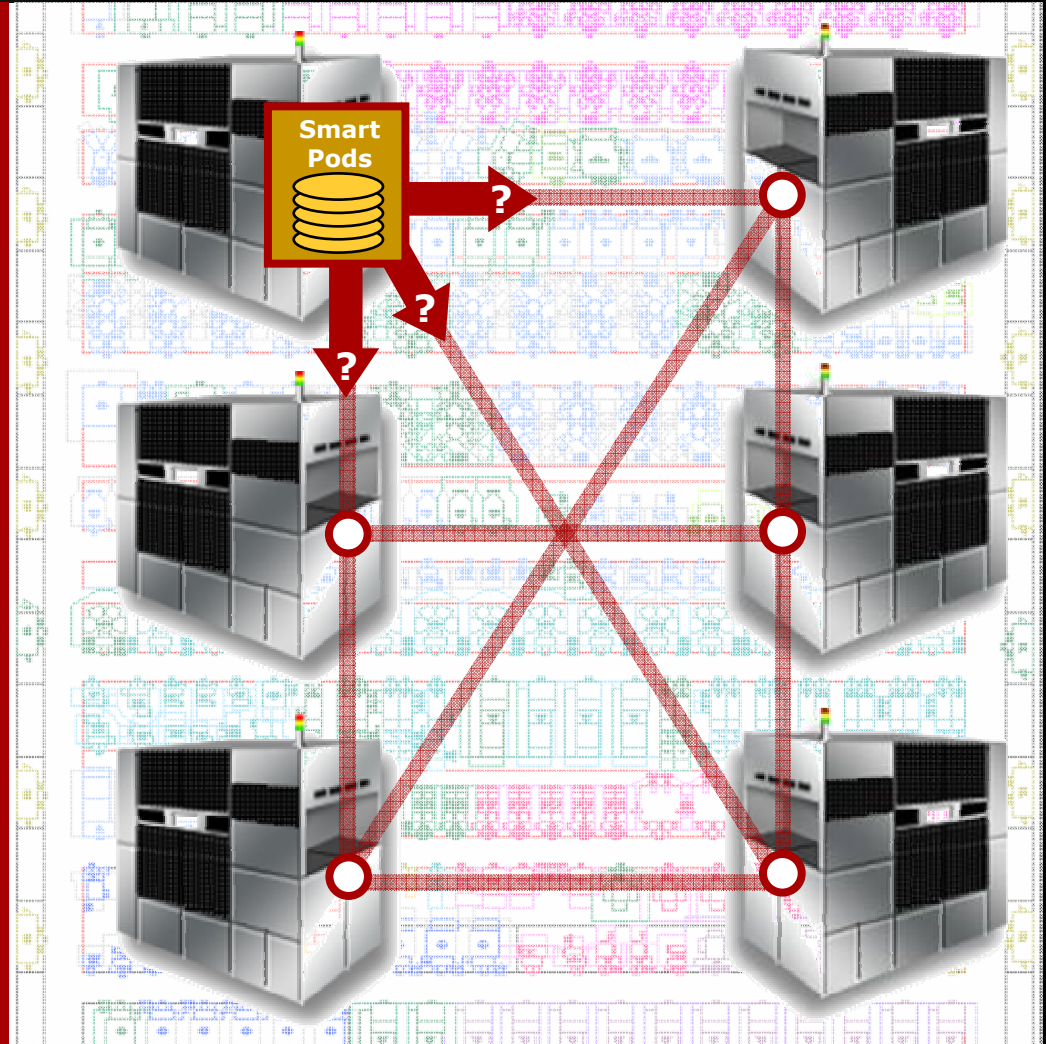
Sneak Peek at APM 3.0: Agent Based Scheduling



Tool to tool automated delivery creates thousands of possible processing paths

Which is the most efficient and cost effective path based on customer requirements?

Software agents are used to enable pod to tool negotiation on the optimal processing path based on current tool and wafer states

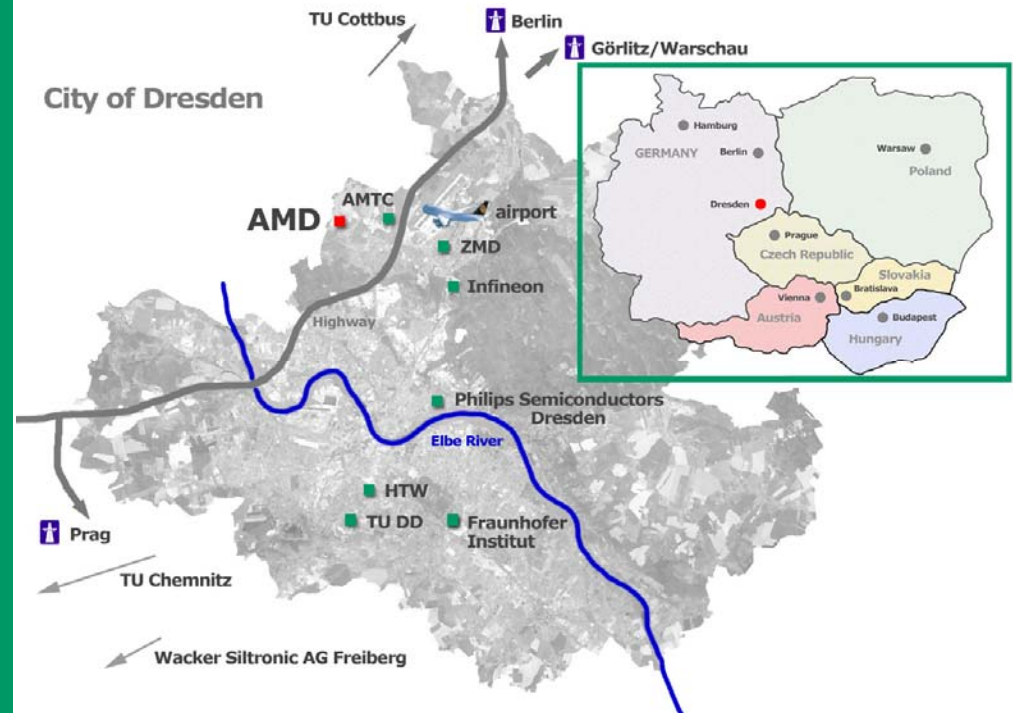


Dresden: One of Europe's largest microelectronics clusters

Center of operations for AMD microprocessor fabrication

Tremendous ongoing success for AMD, The Free State of Saxony, and Germany

Over 7,000 jobs directly or indirectly created by AMD since 1996





Expected to be the most advanced 300mm fab in the world when completed

First test wafer starts in March 2005

Only 16 months from ground breaking to first silicon
On track for volume production in 2006

Planned for 65nm, 45nm and 32nm technology generations





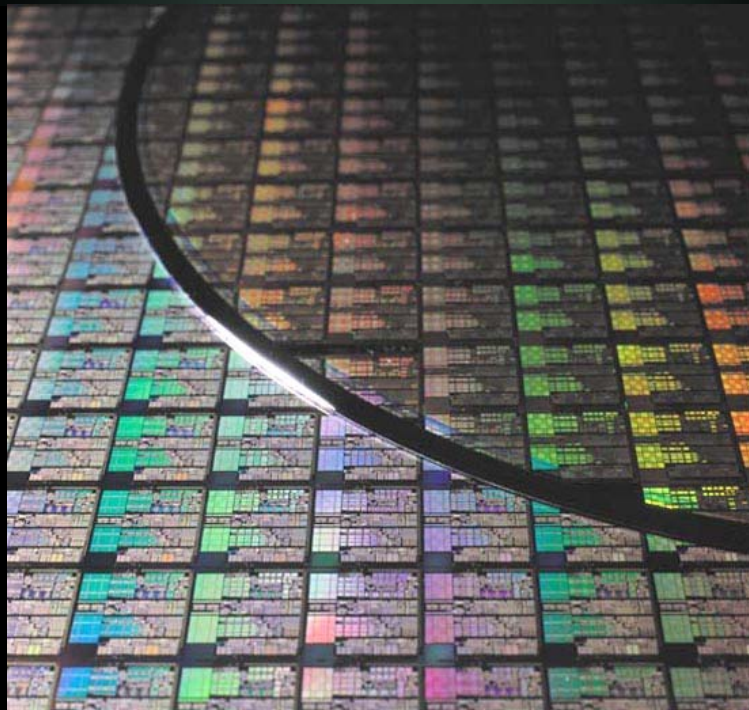


AMD's flagship 200mm fab today producing all AMD64 and AMD Sempron™ processors

All AMD64 wafer starts converted to 90nm by mid-2005

Dual-core AMD64 processors shipping for revenue



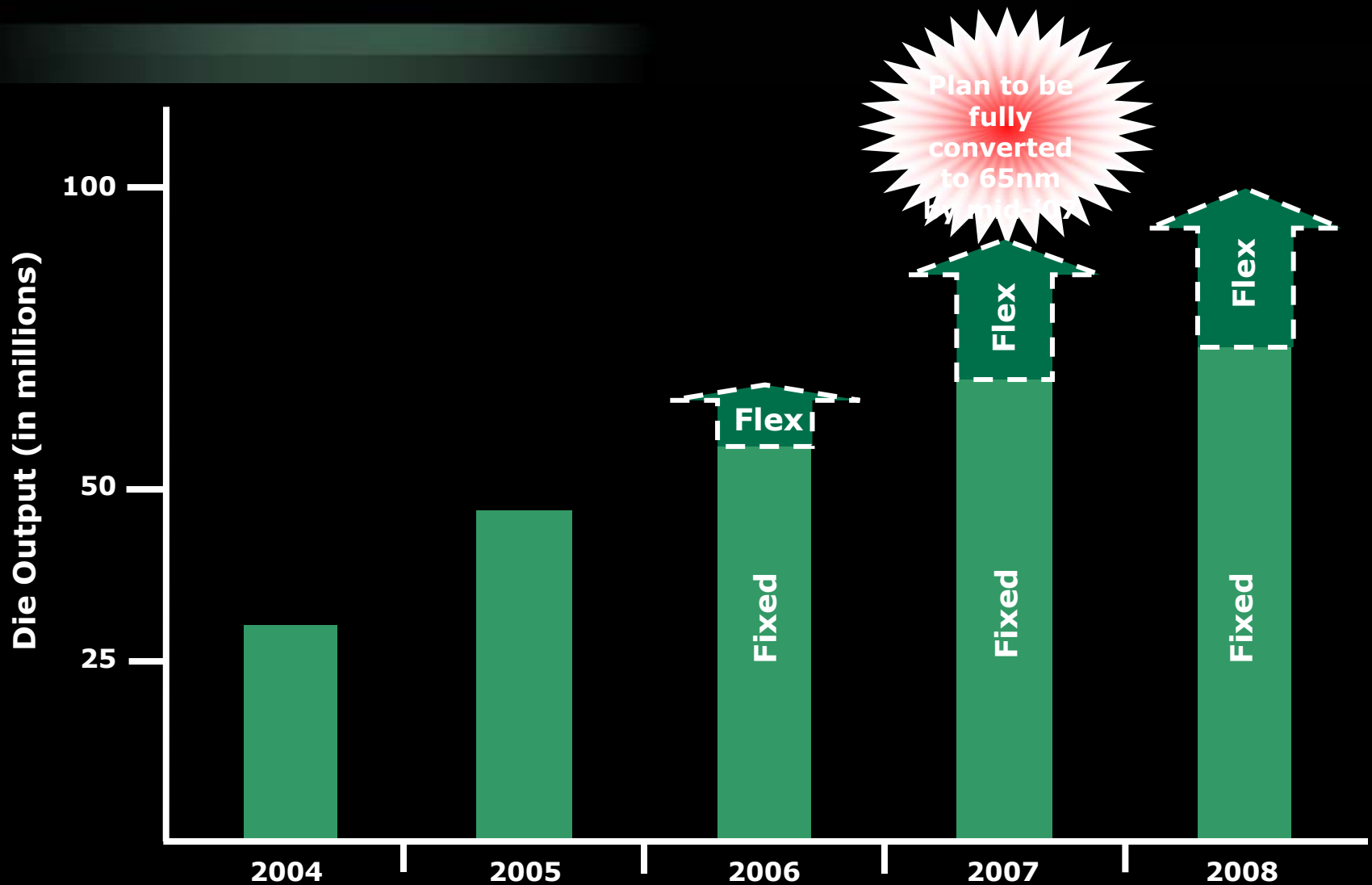


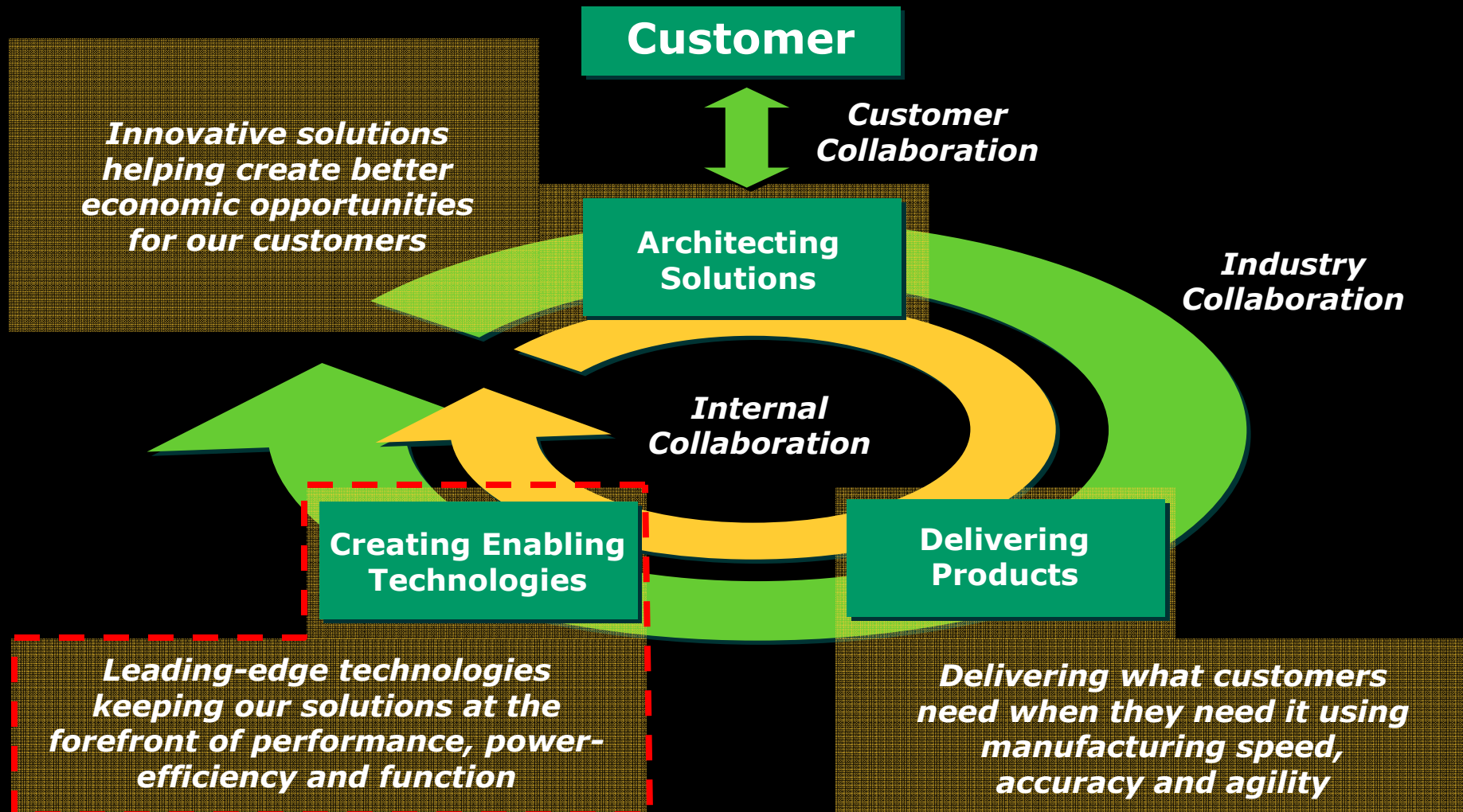
Manufacture of AMD64 microprocessors at Chartered planned to begin in 2006

Operational flexibility — ability to add manufacturing capacity as needed



Executing for Maximum Advantage





Create industry-leading process technologies, using a highly efficient and cost-effective model, to enable industry leading microprocessors.

Distributed Early-Stage Development

- Partnerships
- In-house work
- Consortia
- University work



In-Fab Late-Stage Development

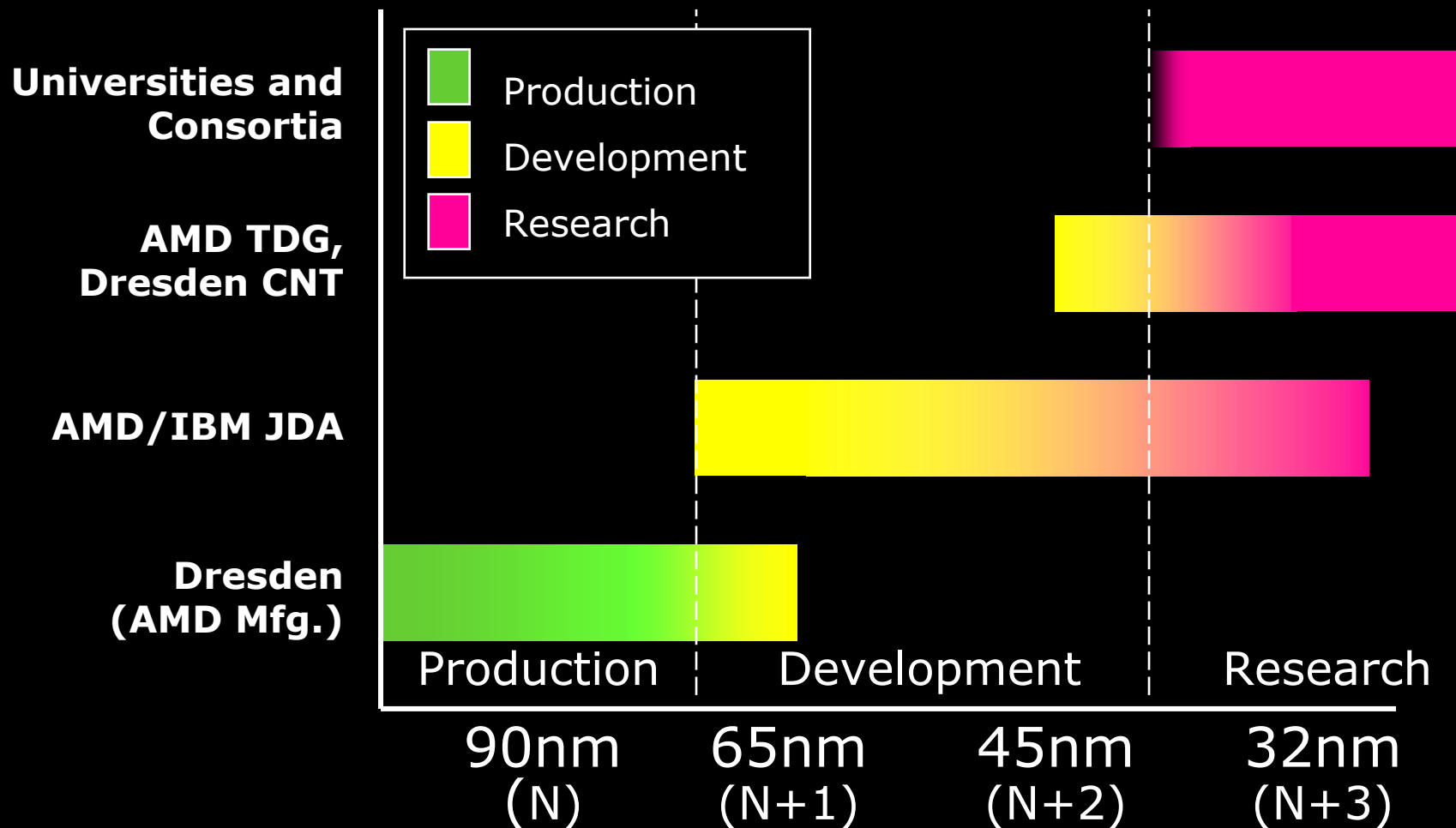
- New technologies run in-fab to accelerate learning and yield ramp
- "Mixed mode" manufacturing enabled by APM

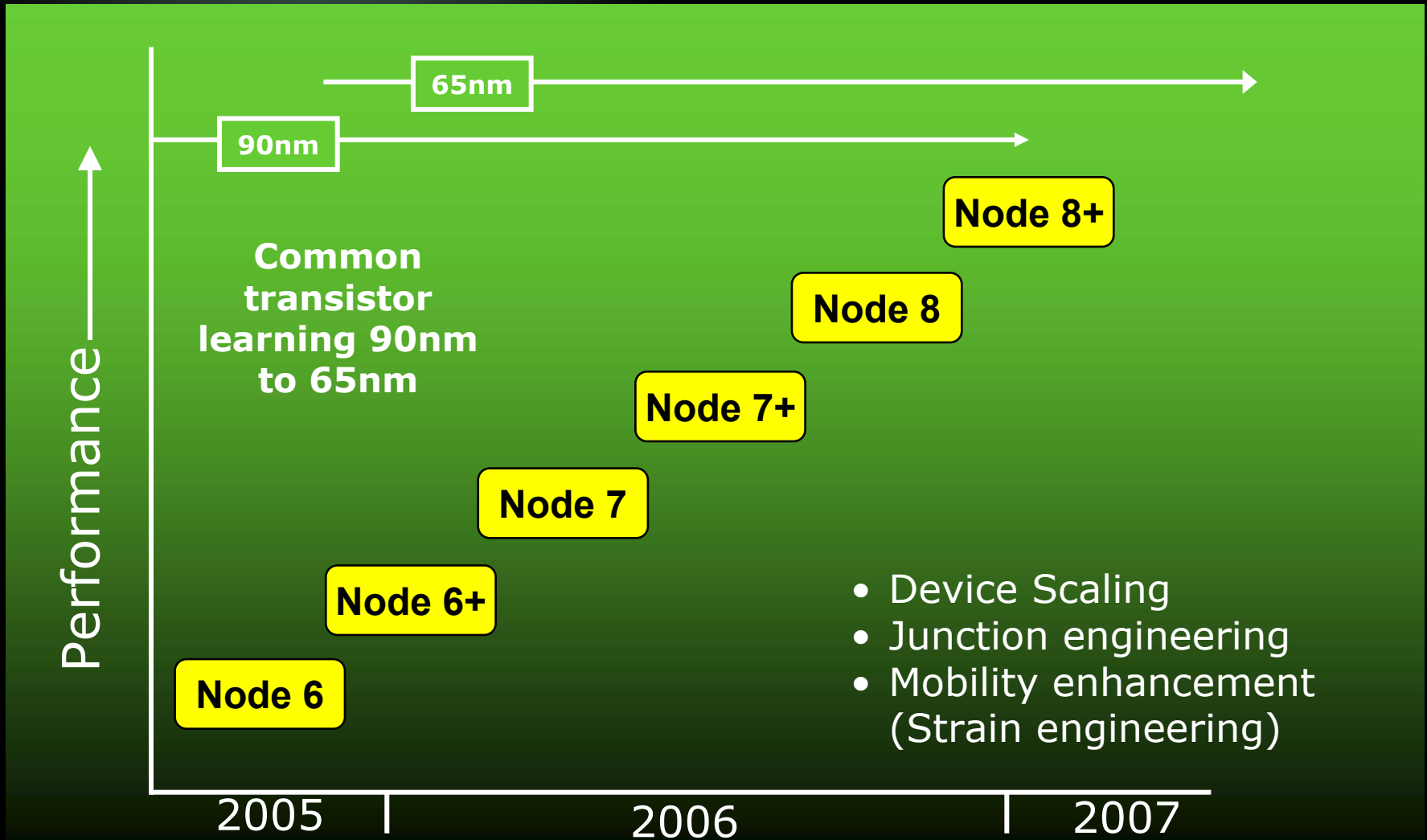


Continuous Technology Improvement

- Quarterly (or more) transistor upgrades
- Rapid, highest value improvements with minimal disruption
- Greatly reduced dependence on major technology generation transitions

Distributed Early Stage Development





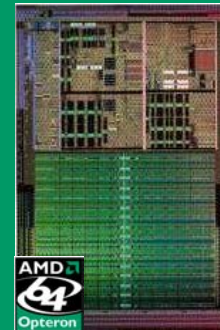
High yield at start of volume production

Builds on 130nm SOI success

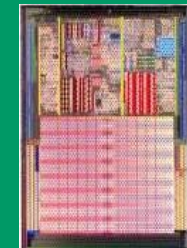
Increased thermal efficiencies

Significant die-size reductions

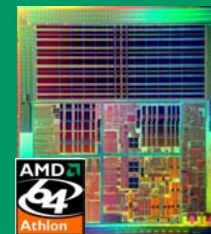
Addition of strained silicon transistor technology



130nm
193mm²



90nm
115mm²



130nm
145mm²



90nm
84mm²

SOI: Dramatically Improved Performance and Power Efficiencies

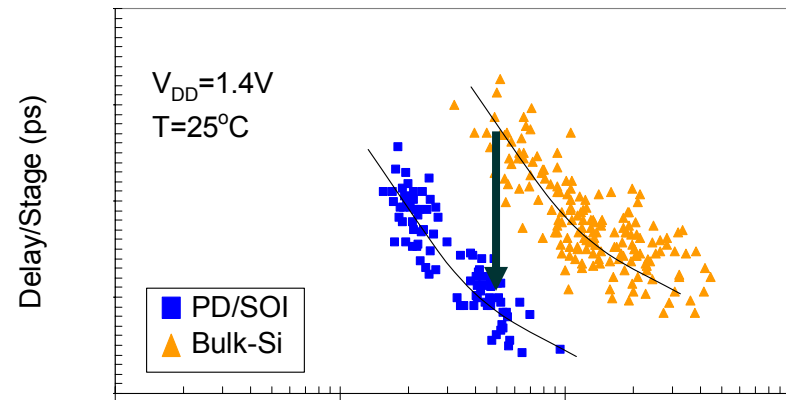


Silicon-on-Insulator Advantages:

At equivalent Off current, SOI can provide up to 18% performance improvement over bulk-Si technology

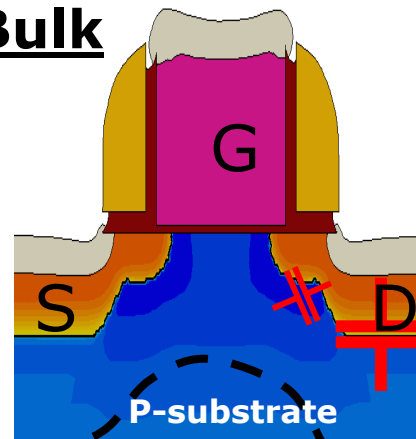
Vertical C_j component is eliminated thus RC delay can be decreased

Higher Reliability due to elimination of latch-up effect and higher radiation hardness

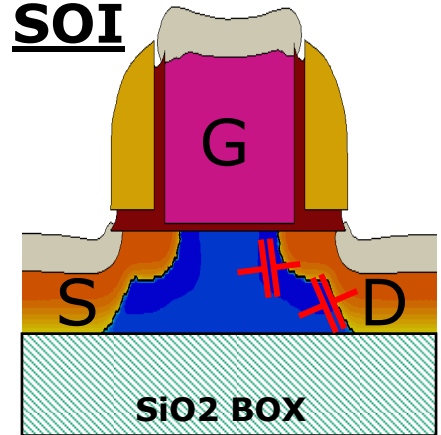


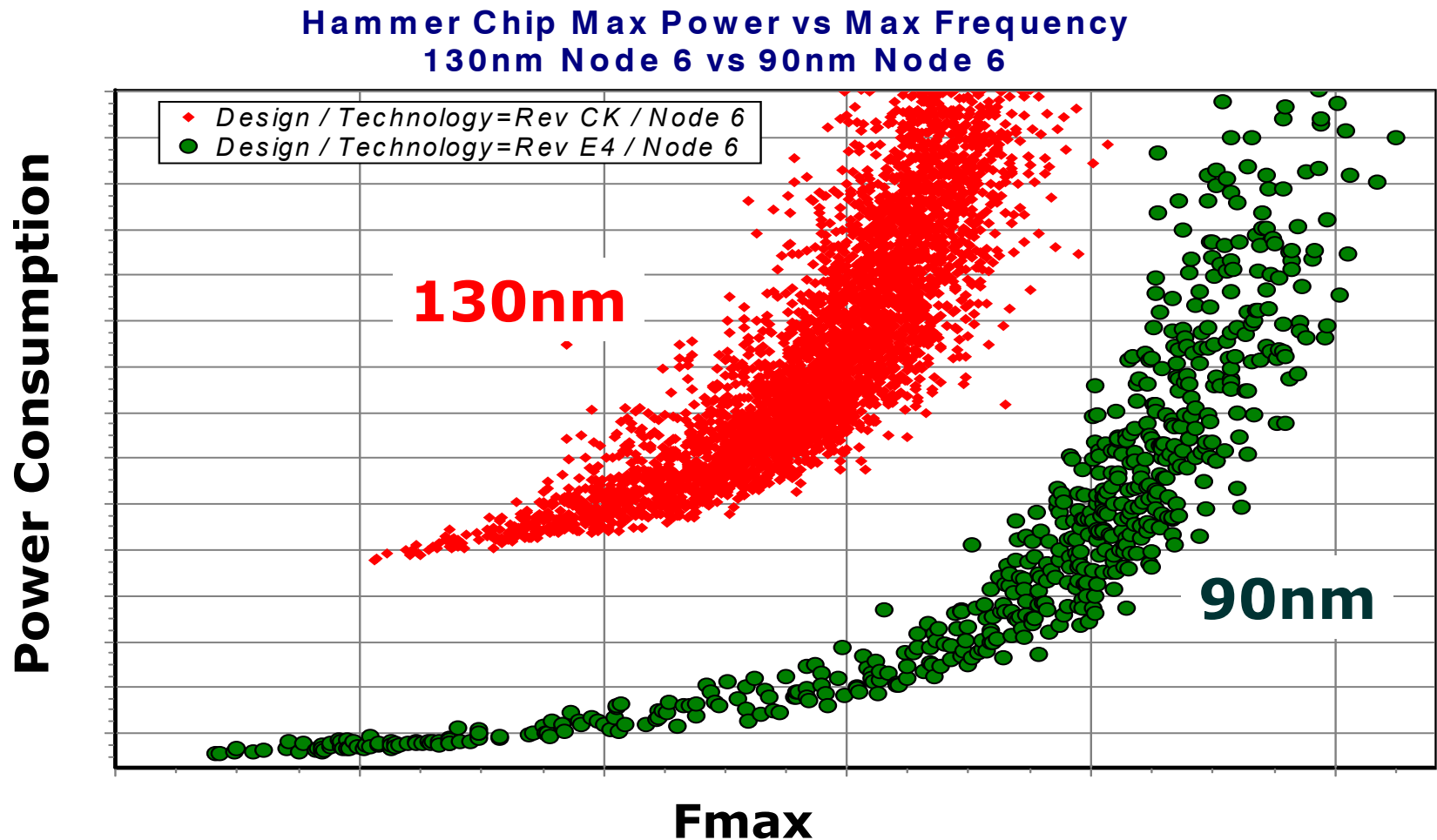
$I_{D-off} (n+2p) (nA/\mu m)$

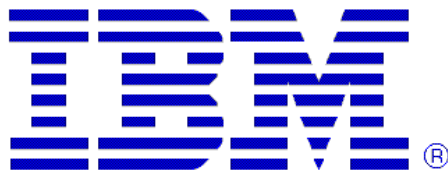
Bulk



SOI







Global joint R&D team in Germany and US

Focus on 65nm, 45nm and 32nm technology generations

Germany work taking place at AMD Fab 30 and Fab 36 in Dresden

US work taking place at IBM 300mm facility in East Fishkill, NY

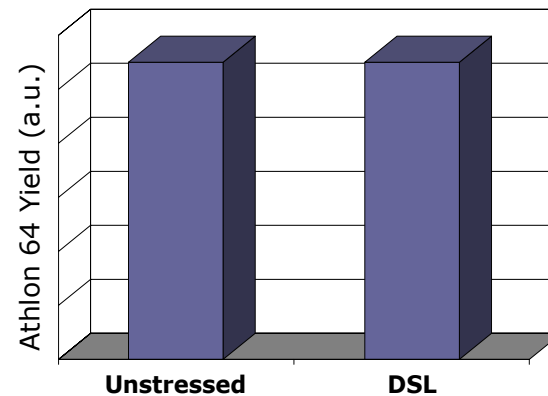
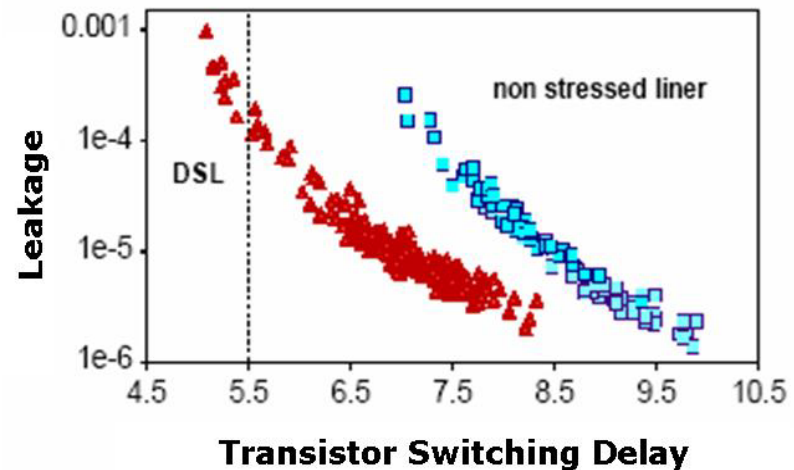
Common goals in high performance

Second-Generation Strained Silicon in Production



~24 percent transistor performance increase with no increase in power
Dual Stress Liners integrated into 90nm generation with equivalent yield

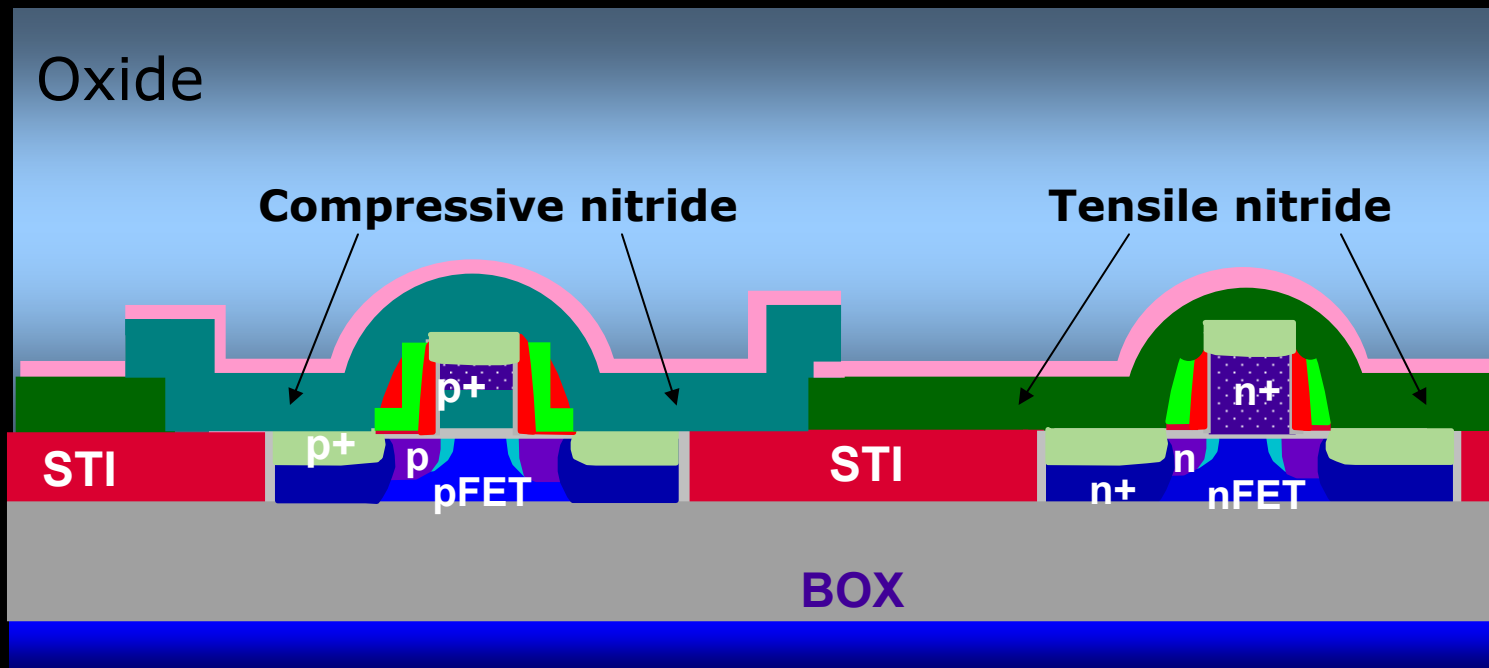
Rapidly integrated into volume manufacturing using standard tools and materials

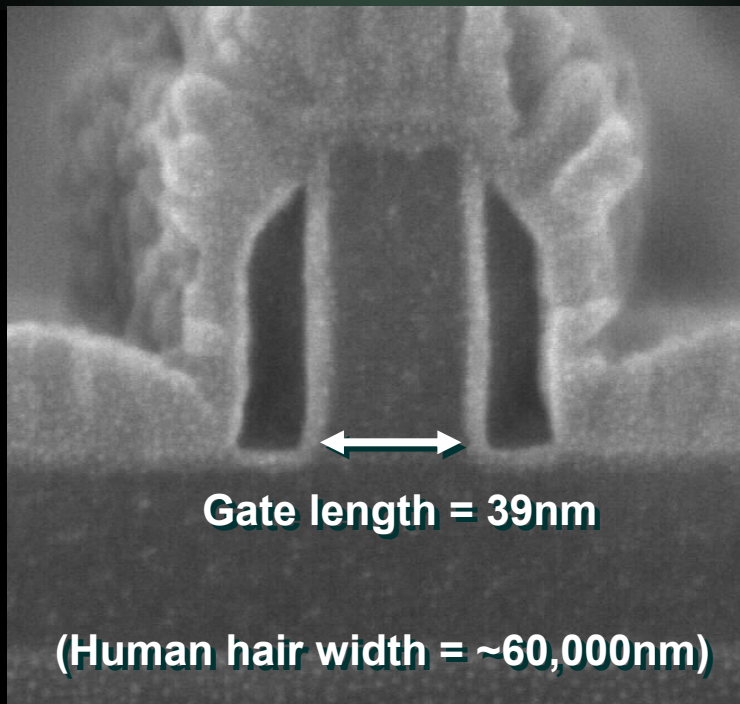


Strain Engineering: Dual Stress Liners (DSL)



Dual Stress Liners simultaneously improve the n-channel and p-channel transistor performance using conventional materials





**High-performance
65nm technology SOI
transistor with strain
engineering**

Achieved our 65nm SRAM milestones

SRAM test vehicle yields are exceeding our development plans

Transistor and interconnect development on schedule

Yield metrics exceeding development plan
3rd generation of strained-silicon
Addition of Nickel Silicide
4th generation of low-k dielectric stack

On schedule for development process installation in Fab 36 in mid-2005

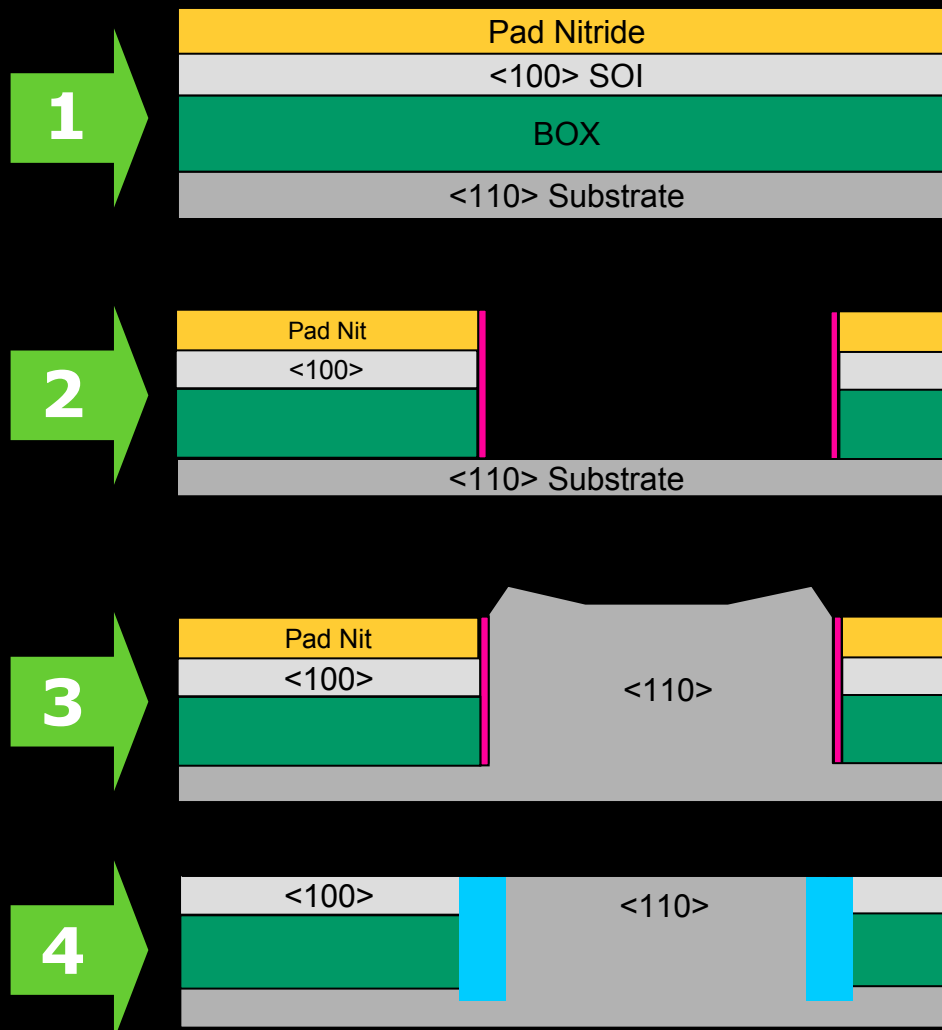
AMD is optimizing Fab 36 for smooth transition of 65nm technology

Hybrid Orientation Technology

Developed under
ASTA alliance

Mobility
improvement using
optimal crystal
orientation

40-60%
enhancement in PFET
performance



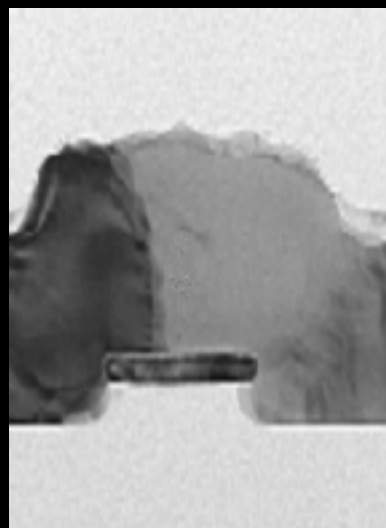
Key candidates:

- Ultra-thin, fully-depleted (FDSOI)
- Metal gate (NiSi)
- Intrinsic channels
- Multi-gate 3D structure
- Strain engineering

Expected advantages:

- Lower leakage (Off current and gate leakage)
- Higher drive currents
- Faster switching
- Exceeded ITRS performance projected for 2009

AMD Metal-Gate FDSOI First Published at SSDM 2003



**Multi-gate
structure
 $L_g=20$ nm**

**Research transistors surpass ITRS
2009 performance projections**

With industry-leading capabilities, accurately aligned capacity levels and world-class execution, AMD is strongly positioned to achieve its aggressive growth objectives through the end of this decade

- APM continues to increase our manufacturing speed, accuracy and agility, enabling us to more rapidly and effectively respond to the needs of customers
- Through smart capacity growth, comprised of both fixed and flexible capacity, AMD can fully achieve its growth objectives and expand capacity as necessary should demand exceed projections
- The Dresden success story continues, with unprecedented levels of efficiency in AMD Fab 30 and the ramp of AMD Fab 36 right on track
- The IBM joint technology alliance is exceeding development objectives and timelines

Cautionary Statement



These presentations contain forward-looking statements, which are made pursuant to the safe harbor provisions of the Private Securities Litigation Reform Act of 1995. Investors are cautioned that forward-looking statements involve risks and uncertainties that could cause actual results to differ materially from current expectations. Forward-looking statements in these presentations relate to, among other things, the company's anticipated product and technology introduction schedules; and the company's plans for tooling and financing its planned wafer fabrications facility AMD Fab 36. Risks include the possibility that global business and economic conditions will worsen in 2005 resulting in lower than currently expected sales; that Intel Corporation's pricing, marketing programs, product bundling, new product introductions or other activities targeting the company's processor business will prevent attainment of the company's current sales plans; that demand for personal computers and other processor-based products and, in turn, demand for the company's processors will be lower than currently expected; that adoption of AMD64 products by OEMs will not occur as expected; that the company will not be able to meet demand for its products; that the company may not achieve its current product and technology introduction schedules; that technology partners will discontinue collaborating with the company; that the company will not be able to raise sufficient capital to enable it to establish leading-edge capacity to maintain its market leadership positions; that the company may not be able to penetrate further into emerging markets; and that solutions providers will not timely provide the infrastructure, including operating systems and applications, to support the company's AMD64 technology.

Because the company's actual results may differ materially from its plans and expectations today, we encourage you to review the company's filings with the Securities and Exchange Commission, including but not limited to our Annual Report on Form 10-K for the year ended December 26, 2004, and our Quarterly Report on Form 10-Q for the quarter ended March 27, 2005.



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